

**IN THE CLAIMS:**

1-65. (canceled)

66. (previously presented) An *H. pylori* bacterial strain, or an extract of an *H. pylori* bacterial strain, wherein the *H. pylori* bacterial strain has an aflagellate phenotype resulting from a mutation in the *flbA* gene of the *H. pylori* bacterial strain.

67. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 66, wherein the *flbA* gene is able to hybridize, under conditions of stringency, with a probe corresponding to a nucleotide fragment from *H. pylori*, which has been amplified using two oligonucleotides having the following sequences:

OLF1bA-1: ATGCCTCGAGGTCGAAAAGCAAGATG (SEQ ID NO:1),

OLF1bA-2: GAAATCTTCATACTGGCAGCTCCAGTC (SEQ ID NO:2).

68. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 66, wherein the *flbA* gene comprises SEQ ID NO: 6.

69. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 66, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

70. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 66, wherein the *H. pylori* bacterial strain also lacks the flagellum sheath.

71. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 70, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

72. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 66, wherein the *H. pylori* bacterial strain is obtained from strain N6 having deposit Accession No. NCIMB 40512.

73. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 66, wherein the *H. pylori* bacterial strain is strain N6flbA<sup>-</sup> having deposit Accession No. NCIMB 40747.

74. (previously presented) The extract of an *H. pylori* bacterial strain according to claim 66, wherein the bacterial extract is a total bacterial extract.

75. (previously presented) The extract of an *H. pylori* bacterial strain according to claim 66, wherein the bacterial extract is a n-octyl glucoside extract.

76. (previously presented) The extract of an *H. pylori* bacterial strain according to claim 66, wherein the bacterial extract is obtained after extracting with PBS or glycine.

77. (previously presented) An *H. pylori* bacterial strain, or an extract of an *H. pylori* bacterial strain, wherein the *H. pylori* bacterial strain has an aflagellate phenotype resulting from a mutation in the *flbA* gene of the *H. pylori* bacterial strain, and wherein the *H. pylori* bacterial strain does not express the FlaA and FlaB proteins.

78. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 77, wherein the *flbA* gene is able to hybridize, under conditions of stringency, with a probe corresponding to a nucleotide fragment from *H. pylori*, which has been amplified using two oligonucleotides having the following sequences:

OLF1bA-1: ATGCCTCGAGGTCGAAAAGCAAGATG (SEQ ID NO:1),

OLF1bA-2: GAAATCTTCATACTGGCAGCTCCAGTC (SEQ ID NO:2).

79. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 77, wherein the *flbA* gene comprises SEQ ID NO: 6.

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80. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 77, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

81. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 77, wherein the *H. pylori* bacterial strain also lacks the flagellum sheath.

82. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 81, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

83. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 77, wherein the *H. pylori* bacterial strain is obtained from strain N6 having deposit Accession No. NCIMB 40512.

84. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim 77, wherein the *H. pylori* bacterial strain is strain N6flbA<sup>-</sup> having deposit Accession No. NCIMB 40747.

85. (previously presented) The extract of an *H. pylori* bacterial strain according to claim 77, wherein the bacterial extract is a total bacterial extract.

86. (previously presented) The extract of an *H. pylori* bacterial strain according to claim 77, wherein the bacterial extract is a n-octyl glucoside extract.

87. (previously presented) The extract of an *H. pylori* bacterial strain according to claim 77, wherein the bacterial extract is obtained after extracting with PBS or glycine.